

Clinical & Refractive Optometry is pleased to present this continuing education (CE) article by Dr. Ron Melton and Dr. Randall Thomas entitled **Phlyctenular Keratoconjunctivitis**. In order to obtain a 1-hour Council of Optometric Practitioner Education (COPE) approved CE credit, please refer to page 205 for complete instructions.

Phlyctenular Keratoconjunctivitis (PKC)

SUBJECTIVE

An 8-year-old girl is brought in by her parents who noticed “a spot” on her right eye two days ago. The child is complaining of mild discomfort and that “the sunlight hurts my eye some.”

OBJECTIVE

- Both eyes are generally white
- There is no discharge
- There is some focal injection to the temporal aspect of the bulbar conjunctiva with a leash of vessels coming onto the cornea (Fig. 1)
- There is a small oval whitish/tan epithelial defect which stains with fluorescein just inside the limbus at the point of the vascular injection pattern (Fig. 2)
- Lid margins are normal

ASSESSMENT

- Phlyctenular keratoconjunctivitis (PKC)

PLAN

- Dexamethasone/tobramycin (Tobradex) ophthalmic suspension 1 gt OD q.i.d. x 4 days
- Recheck in 4 days
- The parents were fully educated as to the nature and course of PKC

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FOLLOW-UP VISIT

SUBJECTIVE

- At the first follow-up visit, the parents were happy that their daughter’s eye was much better
- The patient was asymptomatic (Figs. 3, 4)

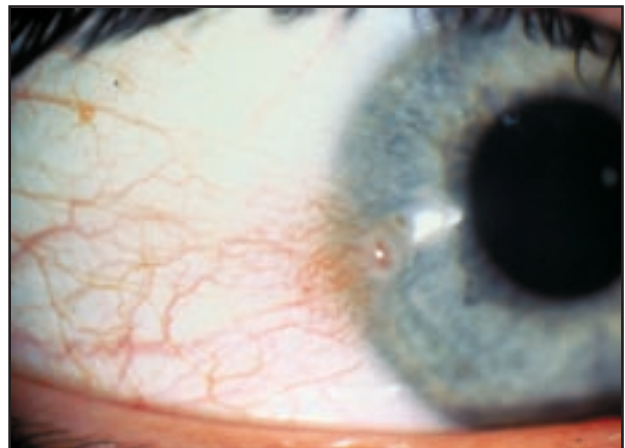


Fig. 1 Corneal phlyctenular lesion with leash of vessels leading to lesion.

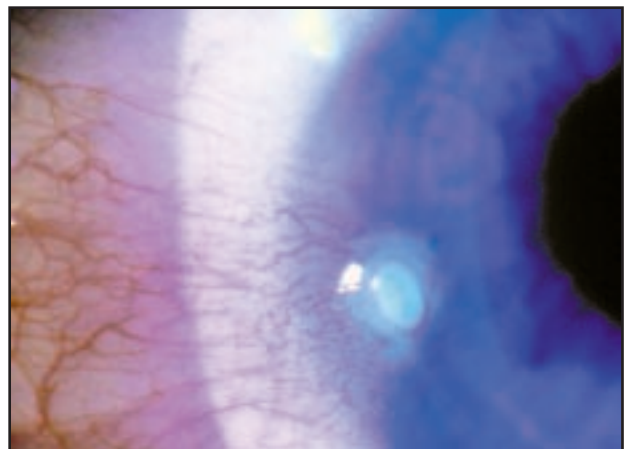


Fig. 2 Because the superficial stromal inflammation compromises overlying epithelial integrity, there is positive fluorescein staining of the corneal lesion.



Fig. 3 Following four days of antibiotic/steroid combination eye drop therapy, tissue restoration is rapid.

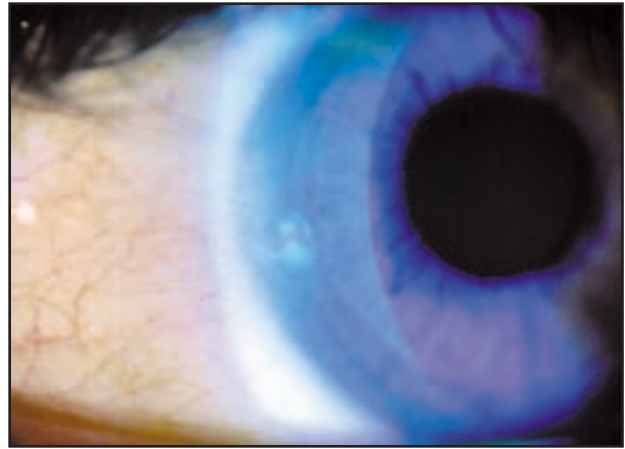


Fig. 4 The epithelium heals once the stromal inflammation is controlled (clinically showing less fluorescein stain).

OBJECTIVE

- The keratoconjunctival lesion was 80% resolved

ASSESSMENT

- Nicely resolving PKC

PLAN

- Decrease dexamethasone/tobramycin to b.i.d. x 6 more days, then stop
- The parents were advised to bring her back if there was any recurrence or problem at all
- At her one-year routine visit, they reported that the patient had remained problem-free during the past year

Comments: A plausible cause can usually be found for such a cell-mediated immune response. Blepharitis is the most common underlying cause; however, other factors such as acne rosacea can be associated. None of these were seen in this patient, and standard empirical therapy, which addressed sub-clinical staphylococcal suspicion as well as suppression of the immune response, was successfully initiated. As with all medical conditions, it is important to try to determine the primary problem and direct the therapy to its eradication.

GENERAL OBSERVATIONS

- Disease mainly of children and young adults — predominantly seen in females
- Though tuberculosis (TB) has historically been the most commonly associated etiologic agent of PKC, the most common contemporary cause is

staphylococcal bacteria. Therefore, assume staph etiology unless the history reveals that the patient has recently traveled to an area where TB is epidemic. Health care workers, especially in nursing homes, may be at increased risk. This pathophysiologic response results from a cell-mediated immunoallergic response to staphylococcal or tubercle bacilli exotoxins. Inflammatory nodules appear as small pinkish/white elevations, usually at the limbus, but can be corneal. (If so, photophobia is often the main symptom)

- Treatment of choice is probably a combination antibiotic/steroid agent effective against staphylococcal species, although some authorities recommend topical corticosteroids alone as the treatment of choice. If TB is suspected, appropriate skin tests (Tine or PPD) can be done at the health department or physician's office. A chest X-ray may be indicated as well if TB is suspected
- If there is associated acne rosacea, oral doxycycline 100 mg b.i.d. x 7 days, then 100 mg for a month may be indicated for patients over age 8, and for non-pregnant, non-breast-feeding women. Erythromycin is a good alternative drug for use in childhood and pregnancy (in consultation with the patient's obstetrician)
- Staphylococcal blepharitis may be the underlying cause. It should be treated with lid scrubs and topical staph-specific agents such as bacitracin ophthalmic ointment at bedtime
- Staphylococcal exotoxin causation of these localized hypersensitivity reactions can also lead to

acute marginal infiltrates which appear yellowish/white in color, or to an inflammatory limbal vasculitis. Again, chronic staph lid disease may be the primary cause. However, topical steroids or steroid/antibiotic combinations nicely suppress the acute ocular condition. Marginal “ulcers” are not infectious, but rather, are yet another expression of epithelial tissue erosions from staph exotoxins. This entire spectrum of cell-mediated disease responds rapidly to corticosteroid suppression, usually via a combination drug such as TobraDex or Maxitrol.

Disclaimer: *Not every detail of every case is discussed, rather the key clinical findings are described. For example, if nothing is said about the corneal status, you should assume that the cornea is normal, etc. When vision is recorded, it should be assumed to be best corrected or pinholed. Regarding therapy, we show how we treated the particular case. Given that medicine is an art, as well as a science, therapy will — and often does — vary with each unique patient presentation depending on severity, known drug allergies, prior treatment, response to therapy, etc.*